AP

13. (Amended) A compound of claim 4 wherein R³ is aryl.

Please amend Claim 30 to read as follows:



30. (Amended) A composition comprising a compound of claim 1 and a pharmaceutically acceptable carrier, adjuvant or excipient.

REMARKS

Applicants submit this Amendment in response to the Office Action mailed September 4, 2002. Claims 1-44 are pending in the application, of which Claims 17 and 31-44 are withdrawn from further consideration. Claims 1-4, 13 and 16 are rejected (as discussed below in more detail) and Claims 5-12, 14, 15 and 18-30 are objected to as being dependent on a rejected Claim. Claims 1, 4, and 13 are amended as set forth above and discussed below. The Specification and Claim 30 are amended to correct an obvious typographical error. The Amendments to the Claims and Specification do not add any new matter and entry thereof is respectfully requested.

Attached hereto is a marked-up version of the changes made to the Specification and Claims by the current amendment. The attached page is captioned "Version With Markings to Show Changes Made."

Restriction Requirement under 35 U.S.C. 121:

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-16, 18-30 (in part), drawn to compounds and pharmaceutical compositions wherein R² is hydrogen, R³ is aryl or aryl(alkylene).
- II. Claims 1-28, 30 (in part), drawn to compounds and compositions wherein R^2 and R^3 are other than in Group I.

III. Claims 31-44, drawn to methods of treating diseases using these compounds.

During a telephone conversation with the undersigned Attorney, a provisional election was made with traverse to prosecute the invention of Group I, Claims 1-16, and 18-30 (in part). Applicants hereby affirm this election without traverse. Claims 17 and 31-44 are withdrawn from further consideration by the Examiner as being directed to non-elected subject matter. Applicants reserve the right to pursue the non-elected subject matter in separate divisional applications.

Applicants have amended Claim 1 to reflect the elected subject matter.

Objection to Claims 4 and 12 under 37 CFR 1.75(c):

Claims 4 and 12 are objected to under 37 CFR 1.75(c) as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Applicants have canceled Claims 2, 3 and 12, and amended Claim 4 to remove the limitation of R² being hydrogen, thereby rendering moot this objection.

In addition, Applicants have amended Claim 13 to be dependent on Claim 4, thereby furthering limiting the subject matter of Claim 4.

Rejection of Claims 16 and 18-29 under 35 U.S.C. 112, ¶ 2:

Claims 16 and 18-29 stand rejected under 35 U.S.C. 112, ¶ 2, for having insufficient antecedent basis for the limitation "that the phenyl group is substituted". In particular, the Examiner contends that there is no definition of such substitution or substituents on the aryl or aryl(alkylene) groups provided for in Claim 1 (on which Claim 16 and 18-29 are dependent).

Applicants respectfully traverse this rejection for the following reasons:

The term "aryl" is defined in the Specification, on page 11, as preferably being a phenyl ring which can be optionally substituted by various substituents. Examples of such substituents are provided on page 15. Accordingly the "aryl" group in both the aryl and aryl(alkylene) groups of R³ can be optionally substituted by various substituents as set forth in the Specification. The Claims are to be read in light of the teachings of the Specification. In the

instant situation, the Specification is clear in defining that an aryl group can be a phenyl ring and that an aryl(alkylene) group can be a benzyl group, and that both groups can be optionally substituted by various substituents as set forth on page 15 and as supported by the numerous compounds illustrated and named in the Specification. Accordingly, Applicants respectfully submit that the substituents as set forth in Claim 16 and the compounds of Claims 18-29, wherein the phenyl or benzyl group therein is optionally substituted, are clearly supported by the teachings of the Specification. Accordingly, withdrawal of this rejection is respectfully requested.

Rejection of Claims 1-4, 9-11, 13 and 16 under 35 U.S.C. 102(b):

Claims 1-4 and 9-11 stand rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,978,385 ("Yagihara"). In particular, the Examiner contends that Yagihara discloses the compounds of the invention wherein R1 is an alkyl and R4 is halogen, alkyl or aryl. Applicants respectfully traverse this rejection in light of the Amendment to Claim 1 as discussed below.

Yagihara discloses compounds of the following formula:

or 1-oxide or salt thereof;

wherein R_1 - R_8 are as defined in the patent and X is a halogen atom.

Applicants have amended Claim 1 to exclude those compounds of the instant invention wherein when R³ is phenyl, R⁴ can not be halogen in the 4-position of the pyridine ring. By so doing, Applicants have removed the compounds of Yagihara, which require a halogen atom at the 4-position of the pyridine ring, from the scope of Claim 1. Accordingly, Applicants respectfully submit that Claims 1-4 and 9-11 are now patentable under 35 U.S.C. 102(b) in light of the disclosure of Yagihara.

The Examiner also rejected Claims 1, 2, 4, 13 and 16 under 35 U.S.C. 102(b) as being anticipated by the disclosure of Chemical Abstracts No. 131:237346, which discloses a compound of the formula:

The Examiner contends that this compounds reads on the compounds of the instant invention wherein n is 0, R¹ is hydrogen, R² is hydrogen and R³ is substituted phenyl.

Applicants traverse this rejection for the following reasons:

Applicants have amended Claim 1 to exclude those compounds wherein when n is 0 and R³ is phenyl, R¹ can not be hydrogen. By so doing, Applicants have remove the compound disclosed above from the scope of Claim 1. Accordingly, Applicants respectfully submit that Claims 1, 2, 4, 13 and 16 are now patentable under 35 U.S.C. 102(b) in light of the compound disclosed in Chemical Abstract No. 131:237346.

The Examiner also rejected Claims 1, 2 and 4 under 35 U.S.C. 102(b) as being anticipated by the disclosure of Chemical Abstracts No. 75:75600, which discloses the compound of the following formula:

The Examiner contends that this compounds reads on the compounds of the instant invention wherein n is 0, R^1 is hydrogen, R^2 is hydrogen and R^3 is phenyl.

For the same reasons as given above for the rejection in light of the compound disclosed in Chemical Abstracts No. 131:237346, Applicants respectfully submit that Claims 1, 2 and 4 are now patentable under 35 U.S.C. 102(b) in light of the compound disclosed in Chemical Abstracts No. 75:75600.

Conclusion:

In light of the foregoing Amendments to the Claims and the above Remarks, Applicants respectfully submit that Claims 1, 4-11, 13-16 and 18-30 are patentable under 35 U.S.C. 112, ¶ 2, and 35 U.S.C. 102(b) and are now in condition for allowance. Favorable consideration of the Claims and a Notice of Allowance are earnestly solicited.

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PATENT TRADEMARK OFFICE

(CJR:cew) #317516

Respectfully submitted,

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DEC 0 4 2002 SELECTION WITH MARKINGS TO SHOW CHANGES MADE

In the Specification:

The paragraph beginning on page 7, line 22, has been replaced with the following paragraph:

In another aspect, the present invention provides composition comprising a compound or compounds as set forth in any of the above-mentioned aspects, and a pharmaceutically acceptable carrier, adjuvant or [incipient] excipient.

In the Claims:

Claims 2, 3 and 12 have been canceled.

Claims 1, 4, 13 and 30 have been amended as follows:

1. (Amended) A compound having the structure (I):

$$O$$
 NR^2R
 $(R^4)_n$
 N^+
 $O^ (I)$

and optical isomers, diastereomers, enantiomers and pharmaceutically acceptable salts thereof, wherein

 R^1 is selected from R^5 and R^5 -(C_1 - C_6 heteroalkylene)- where R^5 is selected from hydrogen, halogen, alkyl, heteroalkyl, aryl, heteroaryl, carbocycle aliphatic ring and heterocycle aliphatic ring, amino or hydroxy;

R² is hydrogen;

R³ is aryl or aryl(alkylene);

 $[R^2 \text{ and } R^3 \text{ are independently hydrogen, alkyl, heteroalkyl, aryl, aryl(akylene), heteroaryl, heteroaryl(alkylene), carbocycle, carbocycle(alkylene), heterocycle, and heterocycle(alkylene);]$

each occurrence of R^4 is independently selected from halogen, alkyl, heteroalkyl, aryl, heteroaryl, carbocycle aliphatic ring and heterocycle aliphatic ring, amino or hydroxy; and n is 0, 1, 2 or 3;

provided, however, that when R^3 is phenyl, R^4 can not be halogen at the 4-position of the pyridine ring, and that when n is 0, and R^3 is phenyl optionally substituted by methoxycarbonyl, R^1 can not be selected from R^5 where R^5 is hydrogen.

- 4. (Amended) A compound of claim 1 wherein n is 0 or 1[and R² is H].
- 13. (Amended) A compound of claim [12] 4 wherein R³ is aryl.
- 30. (Amended) A composition comprising a compound of claim 1 and a pharmaceutically acceptable carrier, adjuvant or [incipient] excipient.